Attorney Docket No.: 28110/37260A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of: Express Mail Label No. EK657818495US Tang et al. Serial No.: To Be Assigned Dated: June 28, 2001 Filed: Herewith I hereby certify that this paper (or fee) is being deposited with the United States Postal Service "EXPRESS MAIL POST METHODS AND MATERIALS For: **RELATING TO NOVEL STEM** OFFICE TO ADDRESSEE" service under 37 CFR §1.10 on the date indicated above **CELL GROWTH FACTOR**and is addressed to the Commissioner for LIKE POLYPEPTIDES AND Patents, Box Patent Application, POLYNUCLEOTIDES Washington, D.C., 20231. Group Art Unit: To Be Determined **Examiner: To Be Determined** whar

STATEMENT UNDER 37 C.F.R. §§1.821(f)

Box Patent Application Commissioner for Patents Washington, DC 20231

Sir:

وأسأو

I hereby state that the content of the paper and computer readable copies of the Sequence Listing, submitted herewith in accordance with 37 C.F.R. §§1.821 (c) and (e), are the same.

Respectfully submitted,

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Richard Zimmermann

Ву

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June 28, 2001

SEQUENCE LISTING

<110> Tang et al.

 ${<}120{>}$ METHODS AND MATERIALS RELATING TO NOVEL STEM CELL GROWTH FACTOR-LIKE POLYPEPTIDES AND POLYNUCLEOTIDES

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Lys Cys Lys Ala Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr

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Lys Asn Phe Cys Thr Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly

Lys Cys Leu Asp Asn Cys Pro Glu Gly Leu Glu Ala Asn Asn

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<212> PRT

<213> Homo sapiens

<400> 19

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Ser Asp Tyr Asn
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<213> Homo sapiens
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Arg Glu Ile Ile Gln
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<213> Homo sapiens
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<212> PRT
<213> Homo sapiens
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Lys Gly Arg Glu Arg Lys Arg Lys Pro Asn Lys Gly Glu Ser Lys
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<400> 23

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<213> Homo sapiens

<400> 24

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Lys Thr Cys Gly 20

<210> 25 <211> 229

<212> PRT

<213> Mus musculus

<400> 25

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Asn Gly Cys Leu Lys Cys Ser Pro Lys Leu Phe Ile Leu Leu Glu Arg 35 40 45

Asn Asp Ile Arg Gln Val Gly Val Cys Leu Pro Ser Cys Pro Pro Gly 50 55 60

Tyr Phe Asp Ala Arg Asn Pro Asp Met Asn Lys Cys Ile Lys Cys Lys 65 70 75 80

Ile Glu His Cys Glu Ala Cys Phe Ser His Asn Phe Cys Thr Lys Cys 85 90 95

Gln Glu Ala Leu Tyr Leu His Lys Gly Arg Cys Tyr Pro Ala Cys Pro 100 105 110

Glu Gly Ser Thr Ala Ala Asn Ser Thr Met Glu Cys Gly Ser Pro Ala 115 120 125

Gln Cys Glu Met Ser Glu Trp Ser Pro Trp Gly Pro Cys Ser Lys Lys 130 140

Arg Lys Leu Cys Gly Phe Arg Lys Gly Ser Glu Glu Arg Thr Arg Arg 145 150 155 160

Val Leu His Ala Pro Gly Gly Asp His Thr Thr Cys Ser Asp Thr Lys
165 170 175

Glu Thr Arg Lys Cys Thr Val Arg Arg Thr Pro Cys Pro Glu Gly Gln 180 185 190

Lys Arg Arg Lys Gly Gly Gln Gly Arg Arg Glu Asn Ala Asn Arg His
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Pro Ala Arg Lys Asn Ser Lys Glu Pro Arg Ser Asn Ser Arg Arg His 210 215 220

Lys Gly Gln Gln Gln 225

<210> 26

<211> 265

<212> PRT

<213> Homo sapiens

<400> 26

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Met His Pro Asn Val Ser Gln Gly Cys Gln Gly Gly Cys Ala Thr Cys 35 40 45

Ser Asp Tyr Asn Gly Cys Leu Ser Cys Lys Pro Arg Leu Phe Phe Ala 50 55 60

Leu Glu Arg Ile Gly Met Lys Gln Ile Gly Val Cys Leu Ser Ser Cys 65 70 75 80

Pro Ser Gly Tyr Tyr Gly Thr Arg Tyr Pro Asp Ile Asn Lys Cys Thr 85 90 95

Lys Cys Lys Ala Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr 100 105 110

Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly Lys Cys Leu Asp Asn \$115\$ \$120\$ \$125\$

Cys Pro Glu Gly Leu Glu Ala Asn Asn His Thr Met Glu Cys Val Ser 130 135 140

Ile Val His Cys Glu Val Ser Glu Trp Asn Pro Trp Ser Pro Cys Thr 145 150 155 160

Lys Lys Gly Lys Thr Cys Gly Phe Lys Arg Gly Thr Glu Thr Arg Val 165 170 175

Arg Glu Ile Ile Gln His Pro Ser Ala Lys Gly Asn Leu Cys Pro Pro 180 185 190

Thr Asn Glu Thr Arg Lys Cys Thr Val Gln Arg Lys Lys Cys Gln Lys 195 200 205

Gly Glu Arg Gly Lys Lys Gly Arg Glu Arg Lys Arg Lys Lys Pro Asn 210 215 220

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Val Ser Val Ser Thr Val His
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<213> Homo sapiens
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Thr Gln Pro Thr Pro Cys Arg Arg Arg Tyr Leu
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<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR primer
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<213> Mus musculus
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<221> CDS
<222> (511)..(1347)
<400> 31
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gcc aag ggt aag ggt aac ctg tgc ccc cca acc agc gag aca aga act Ala Lys Gly Lys Gly Asn Leu Cys Pro Pro Thr Ser Glu Thr Arg Thr 185 190 195 200)
tgt ata gta caa aga aag tgt tca aag gga gag cga gga aaa aag 1158 Cys Ile Val Gln Arg Lys Lys Cys Ser Lys Gly Glu Arg Gly Lys Lys 205 210 215	\$
gga aga gag aga aaa cga aaa aaa ctg aat aaa gaa gaa aga aag gaa 1206 Gly Arg Glu Arg Lys Arg Lys Lys Leu Asn Lys Glu Glu Arg Lys Glu 220 225 230	5
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Met His Pro Asn Val Ser Gln Gly Cys Gln Gly Gly Cys Ala Thr Cys 40 45

Ser Asp Tyr Asn Gly Cys Leu Ser Cys Lys Pro Arg Leu Phe Phe Val

Leu Glu Arg Ile Gly Met Lys Gln Ile Gly Val Cys Leu Ser Ser Cys
65 70 75 80

Pro Ser Gly Tyr Tyr Gly Thr Arg Tyr Pro Asp Ile Asn Lys Cys Thr 85 90 95

Lys Cys Lys Val Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr

Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly Lys Cys Leu Asp Ser 115 120 125

Cys Pro Glu Gly Leu Glu Ala Asn Asn His Thr Met Glu Cys Val Ser 130 135 140

Ile Val His Cys Glu Ala Ser Glu Trp Ser Pro Trp Ser Pro Cys Met 145 150 155 160

Lys Lys Gly Lys Thr Cys Gly Phe Lys Arg Gly Thr Glu Thr Arg Val 165 170 175

Arg Asp Ile Leu Gln His Pro Ser Ala Lys Gly Lys Gly Asn Leu Cys 180 185

Pro Pro Thr Ser Glu Thr Arg Thr Cys Ile Val Gln Arg Lys Lys Cys 195 200 205

Ser Lys Gly Glu Arg Gly Lys Lys Gly Arg Glu Arg Lys Arg Lys Lys 210 215 220

Leu Asn Lys Glu Glu Arg Lys Glu Thr Ser Ser Ser Ser Asp Ser Lys 225 230 235 240

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Arg Gln Gln Gln Lys Arg Arg Ala Arg Asp Lys Gln Gln Lys Ser 260 265 270

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aga aaa aaa Arg Lys Lys 220	cct aat Pro Asn	aaa gga Lys Gly 225	gaa Glu	agt Ser	aaa Lys	gaa Glu 230	gca Ala	ata Ile	cct Pro	gac Asp	agc Ser 235	963
aaa agt ctg Lys Ser Leu	gaa tcc Glu Ser 240	Ser Lys	gaa Glu	atc Ile	cca Pro 245	gag Glu	caa Gln	cga Arg	gaa Glu	aac Asn 250	aaa Lys	1011
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ttagaagaaa												
caaagtcatg												
ccacctggaa	ctaaaag	gga tact	atttt	c ta	acaa	ıggta	tat	ctag	gtag	ggga	agaaago	
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<400> 34

Met His Leu Arg Leu Ile Ser Trp Leu Phe Ile Ile Leu Asn Phe Met
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Glu Tyr Ile Gly Ser Gln Asn Ala Ser Arg Gly Arg Arg Gln Arg Arg 20 25 30

Met His Pro Asn Val Ser Gln Gly Cys Gln Gly Gly Cys Ala Thr Cys
45

Ser Asp Tyr Asn Gly Cys Leu Ser Cys Lys Pro Arg Leu Phe Phe Ala 50 55 60

Leu Glu Arg Ile Gly Met Lys Gln Ile Gly Val Cys Leu Ser Ser Cys
65 70 75 80

Pro Ser Gly Tyr Tyr Gly Thr Arg Tyr Pro Asp Ile Asn Lys Cys Thr

Lys Cys Lys Ala Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr 100 105 110

Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly Lys Cys Leu Asp Asn 115 120 125

Cys Pro Glu Gly Leu Glu Ala Asn Asn His Thr Met Glu Cys Val Ser 130 135 140

Ile Val His Cys Glu Val Ser Glu Trp Asn Pro Trp Ser Pro Cys Thr 145 150 155 160

Lys Lys Gly Lys Thr Cys Gly Phe Lys Arg Gly Thr Glu Thr Arg Val 165 170 175

Arg Glu Ile Ile Gln His Pro Ser Ala Lys Gly Asn Leu Cys Pro Pro 180 185 190

Thr Asn Glu Thr Arg Lys Cys Thr Val Gln Arg Lys Lys Cys Gln Lys
195 200 205

Gly Glu Arg Gly Lys Lys Gly Arg Glu Arg Lys Arg Lys Lys Pro Asn 210 215 220

Lys Gly Glu Ser Lys Glu Ala Ile Pro Asp Ser Lys Ser Leu Glu Ser 225 230 235 240

Ser Lys Glu Ile Pro Glu Gln Arg Glu Asn Lys Gln Gln Gln Lys Lys 245 250 255

Arg Lys Val Gln Asp Lys Gln Lys Ser Val Ser Val Ser Thr Val His 260 265 270

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR primer
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<212> DNA
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<400> 42
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gattttaggt gacactatag
<210> 43
<211> 34
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR primer
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<211> 29
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR primer
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                                                                    29
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Thr Gln Pro Thr Pro Cys Arg Arg Arg Tyr Leu
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Thr Gln Pro Thr Pro Cys Arg Arg Arg Tyr Leu
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Glu Tyr Ile Gly Ser Gln Asn Ala Ser Arg Gly Arg Arg Gln Arg Arg 20 25 30

Met His Pro Asn Val Ser Gln Gly Cys Gln Gly Gly Cys Ala Thr Cys 35 40 45

Ser Asp Tyr Asn Gly Cys Leu Ser Cys Lys Pro Arg Leu Phe Phe Ala 50 55 60

Leu Glu Arg Ile Gly Met Lys Gln Ile Gly Val Cys Leu Ser Ser Cys 65 70 75 80

Pro Ser Gly Tyr Tyr Gly Thr Arg Tyr Pro Asp Ile Asn Lys Cys Thr 85 90 95

Lys Cys Lys Ala Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr 100 105 110

Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly Lys Cys Leu Asp Asn 115 120 125

Cys Pro Glu Gly Leu Glu Ala Asn Asn His Thr Met Glu Cys Val Ser 130 135 140

Ile Val His Cys Glu Val Ser Glu Trp Asn Pro Trp Ser Pro Cys Thr 145 150 155 160

Lys Lys Gly Lys Thr Cys Gly Phe Lys Arg Gly Thr Glu Thr Arg Val 165 170 175

Arg Glu Ile Ile Gln His Pro Ser Ala Lys Gly Asn Leu Cys Pro Pro 180 185 190

Thr Asn Glu Thr Arg Lys Cys Thr Val Gln Arg Lys Lys Cys Gln Lys 195 200 205

Gly Glu Arg Gly Lys Lys Gly Arg Glu Arg Lys Arg Lys Lys Pro Asn 210 215 220 Lys Gly Glu Ser Lys Glu Ala Ile Pro Asp Ser Lys Ser Leu Glu Ser 225 230 235 240

Ser Lys Glu Ile Pro Glu Gln Arg Glu Asn Lys Gln Gln Gln Lys Lys 245 250 255

Arg Lys Val Gln Asp Lys Gln Lys Ser Gly Ile Glu Val Thr Leu Ala 260 265 270

Glu Gly Leu Thr Ser Val Ser Gln Arg Thr Gln Pro Thr Pro Cys Arg 275 280 285

Arg Arg Tyr Leu 290